

5.4M
ASTHMA SUFFERERS
IN **UK**, OF WHICH
250,000
HAVE SEVERE ASTHMA



THE **NHS** SPENDS
£1 BILLION
A YEAR
**TREATING AND
CARING FOR
PEOPLE WITH
ASTHMA**

DUE TO **LACK OF STRATIFYING DIAGNOSTICS**
CURRENT **INTERNATIONAL ASTHMA GUIDELINES**
ADVOCATE A '**TRIAL AND ERROR**' APPROACH
WITH PROGRESSIVE ESCALATION OF TREATMENT



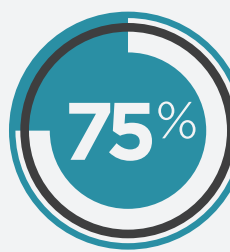
EVERY YEAR THERE ARE

1.1M
**WORKING
DAYS LOST**

54,000
**EMERGENCY
ADMISSIONS**
AT A COST OF
£54.7M TO THE
NHS

220,000
BED DAYS
IN HOSPITAL

1,167
DEATHS
FROM ASTHMA
IN THE UK
IN 2011



75% OF HOSPITAL ADMISSIONS
FOR ASTHMA ARE **AVOIDABLE**



90% OF THE DEATHS FROM
ASTHMA ARE **PREVENTABLE**



THERE IS AN **URGENT NEED** TO DEVELOP
INNOVATIVE DIAGNOSTIC TOOLS
TO MATCH THE **RIGHT PATIENT** WITH THE **RIGHT TREATMENT**

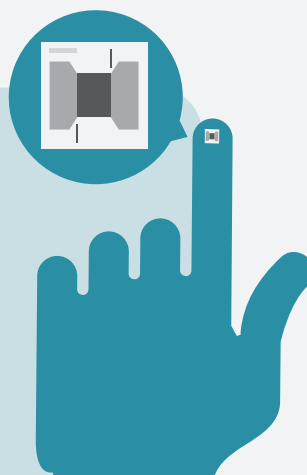
EVERY TIME WE **BREATHE**
OUT THERE ARE **HUNDREDS** OF
CHEMICALS ON OUR BREATH.



SOME OF THESE VOLATILE BIOMARKERS CAN BE
USED TO DISTINGUISH CLINICAL PHENOTYPES
IN ASTHMA AND PREDICT WHO WILL RESPOND
TO CURRENTLY AVAILABLE STEROID TREATMENT.

OWLSTONE HAS DEVELOPED
A **CHEMICAL SENSOR**
ON A **SILICON CHIP**

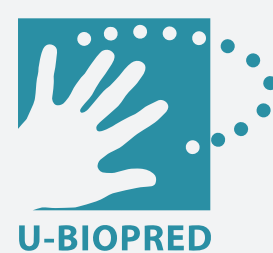
100X & **1000X**
CHEAPER & **SMALLER**
THAN EXISTING TECHNOLOGIES



OWLSTONE HAS BEEN ABLE
TO TAKE THIS SILICON CHIP
AND INTEGRATE IT INTO
A BREATHALYZER TO
**DETECT VOLATILE
BIOMARKERS
OF ASTHMA**

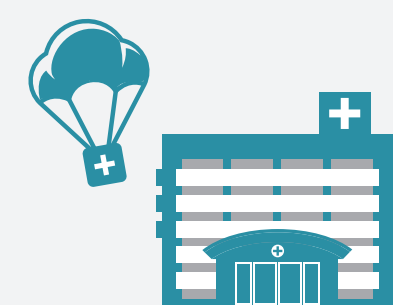


U-BIOPRED IS A EUROPEAN CONSORTIUM WHICH HAS BEEN RUNNING FOR THE LAST 4 YEARS.
AT THE SEPTEMBER 2015 **ERS** CONFERENCE THEY REPORTED HOW **OWLSTONE TECHNOLOGY**
COULD BE USED TO **STRATIFY ASTHMATIC PATIENTS** INTO SUB-GROUPS, ACCORDING TO WHICH
TYPE OF TREATMENT THEY ARE MOST LIKELY TO BENEFIT FROM.



THE GOAL OF STRATA IS TO MOVE THERAPY FROM A 'TRIAL AND ERROR' APPROACH
TO ONE THAT SELECTS THE MOST APPROPRIATE ASTHMA TREATMENT, INCREASING
THE OVERALL SUCCESS RATE OF TREATMENT AND REDUCING THE NUMBER OF ADVERSE
EVENTS FOR PATIENTS AND COSTS TO THE NHS.

OWLSTONE IS WORKING WITH UK **ENABLING INFRASTRUCTURE** PARTNERS
(NIHR DEC, MRC EMBER, MRC, RASP-UK, MHRA) TO **ACCELERATE TIME**
TO DEPLOYMENT IN HOSPITALS AND GP SURGERIES.



OUR GOAL IS TO SAVE THE **NHS** **£81M**